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THE OHIO STATE UNIVERSITY

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EDUCATIONAL RESEARCH BULLETIN

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CONTENTS

Radio in the Schools of Ohio 115
By SEERLEY REID, *Bureau of Educational Research*

Editorial Comment 149

Conference on Human Development in Wartime 151

Readings 155

BOOKS TO READ—*Education in a Democracy; The Principal at Work; Duties of School Principals; Mathematics Teachers' Views on Certain Issues in the Teaching of Mathematics; Political Science in American Colleges and Universities, 1636–1900; Three Hundred Gifted Children: a Follow-up Study of the Results of Special Education of Superior Children; Children from Seed to Saplings; Physical Education for Small Elementary Schools; Language in Action: a Guide to Accurate Thinking, Reading and Writing.*

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Educational Research Bulletin

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Radio in the Schools of Ohio

I. The Survey

RADIO is an indispensable and indisputable part of American life. In nine out of ten homes in the United States, adults and children alike spend several hours a day before the loud-speaker listening to comedians and pseudo-comedians, symphony orchestras and dance bands, news reporters and commentators, quiz programs and amateur shows, radio dramas and melodramas. To millions upon millions of Americans, the radio is a source of entertainment and information, a form of dramatic and artistic expression, an agency of communication and education. Of the importance of radio in American life there can be no question.

To what extent has this new medium of expression, this form of communication, this agency of education been assimilated into the schools and classrooms of America? To what extent is radio a part of the classroom educational experiences of boys and girls? The answer, briefly and succinctly, is that we do not know.

During the last ten years, during the same period, strangely enough, when audience surveys of radio listeners to commercial broadcasts have become commonplace, there have been almost no surveys of the use of radio in the schools of America.[1] There have been plenty of guesses, but very few facts.

In an attempt to plug this gap in radio and educational research, we of the Evaluation of School Broadcasts staff at Ohio State University, with the co-operation of the Ohio State

[1] There have been, of course, local surveys made in different communities, from which, unfortunately, there has been a tendency to generalize to the entire country. The best studies covering more than a local school system are: Cline M. Koon and Allen W. Noble, *National Visual Education Directory* (Washington, D. C.: American Council on Education, 1936); Seerley Reid, "The Classroom Audience of Network School Broadcasts" (Evaluation of School Broadcasts, Bulletin 34, Ohio State University, 1941); Federal Radio Education Committee, "High School Play-back Equipment." Frank Stanton, director of research, Columbia Broadcasting System, in 1938 made a nation-wide survey of the classroom audience to network school broadcasts, but the data have never been released.

Department of Education, undertook and completed in the spring of 1941 a comprehensive radio survey of the schools of Ohio. Briefly, the survey was designed to obtain answers to these three major questions:

1. To what extent do schools possess radio and sound equipment—radios, central sound systems, phonographs, transcription players, and recorders?
2. To what extent do schools and teachers use school broadcasts—network, state, and local broadcasts?
3. To what extent do schools use the content and techniques of radio in curricular and extra-curricular activities—workshops and dramatic groups, radio units or courses of study, attention to out-of-school broadcasts, student participation in programs broadcast over local radio stations?

Perhaps a few words should be said in defense of our choice of Ohio. It is obvious, of course, that a survey of the schools of Ohio had, to us at Ohio State University, certain advantages over a survey of the schools of Illinois or Texas or New York or even of the entire nation. We felt that a state-wide survey was necessary in order to secure a fair representation of rural schools and thus avoid the urban bias so evident in many educational surveys. We felt that in limiting the survey to a single state we could secure a much higher percentage of response than would be possible if we sent our questionnaires throughout the forty-eight states, thus reducing the bias of non-respondents. We were in Ohio, so we chose Ohio.[2]

A few words concerning the scope of the survey: In March, 1941, questionnaires were mailed to 3,293 principals of Ohio schools. Three weeks later a follow-up questionnaire was sent to non-respondents and then, once again, a follow-up was made of a sample of those individuals who had responded to neither the first nor the second questionnaire. Thus we used three "waves" of questionnaires, an original mailing and two follow-up questionnaires. All in all, we received replies from 2,348 schools, a return of 71.3 per cent—from rural and urban, elementary and secondary schools, as follows:

Rural schools	1,356	Elementary schools	1,326
Urban schools	992	Twelve-year schools	636
		Secondary schools	386
	2,348		2,348

[2] In this process the determining factor was the co-operation of the Ohio State Department of Education under whose authority the questionnaires were mailed to Ohio principals.

In the survey we recognized two limitations in the representativeness of the questionnaire respondents: first, the possibility, even probability, that replies of non-respondents differed from the replies of respondents; second, the inadequate representation given in the group of respondents to rural elementary schools, especially to one-room rural schools. We recognized both these limitations and, fortunately, we were able to meet both of them[3] so that the data presented in this report are our best estimates of the use of radio in the schools of Ohio in the spring of 1941.

NEXT, a brief explanation of the presentation of data in this report: Part II deals with radio and sound equipment, Part III with school broadcasts, and Part IV with other school uses of radio, such as radio workshops and radio courses. Throughout these three sections, we have tried to present the data graphically so that facts and relationships will be easily apparent to the reader. The comments beneath each chart not only point out significant facts and relationships in the chart but also provide additional data which could not be incorporated into the graphic presentation. Part V contains some conclusions and nine recommendations growing out of the findings. Readers interested in our recommendations may wish to turn to this section first and return later to Parts II, III, and IV.

We believe that this survey of Ohio is of more than local significance, that the results should be of importance to radio educators throughout the United States. The question, then, arises: Is Ohio educationally representative of the United States? Or more specifically: Is Ohio, with respect to the use of radio in school, educationally representative of the United States? To this question we have no precise answer nor can we obtain such an answer, since there have been no comprehensive nation-wide surveys of radio in the schools of America. We can, however, say with comparative safety that the schools of Ohio are equal to the schools of the nation in the development of radio in education. And we have a hunch that the situation in Ohio is much better than in the country as a whole. Consider these facts:

First, it is generally recognized that Ohio educational prac-

[3] Readers who are interested in the methodology will find a complete explanation in "Radio in the Schools of Ohio" by the writer (Evaluation of School Broadcasts, Bulletin 43, Ohio State University, 1942, pp. 32–57).

tices are qualitatively better than those prevailing throughout the country; for example, during 1937–38 Ohio schools were in session an average of 181.2 days as contrasted to the national average of 173.9 days; the average annual salary of the Ohio instructional staff was $1,506 as contrasted to a national average of $1,374; the annual cost of education per pupil was $86.90 in Ohio as contrasted to $76.39 throughout the nation.[4]

Second, during the last fifteen years Ohio has been one of the pioneer states in the development of educational radio. The Ohio School of the Air, for example, was the first organized effort to produce radio programs for classroom consumption. One of the most important educational conferences in radio, the Institute for Education by Radio, has been held annually at Ohio State University since 1930. And many of the leaders in educational radio, such as W. W. Charters, Ben H. Darrow, F. H. Lumley, and I. K. Tyler, have been influential in furthering the development of radio in the schools of Ohio.

Third, nowhere in the United States has the classroom use of radio been organized and developed to the extent it has been in Cleveland. Here the Board of Education owns and operates its own radio station, WBOE, from which are broadcast throughout the day numerous series of programs for classroom audiences in the Cleveland public schools. According to our survey, four-fifths of the schools in Cleveland used school broadcasts; outside of Cleveland, less than one-fifth of Ohio schools used such broadcasts. Not only in the matter of classroom listening, but also in radio equipment, in student broadcasting, and in various other radio activities, the schools of Cleveland are among the leaders of the country.

Fourth, in 1936, Koon and Noble reported the following data relative to radio and sound equipment in the schools of Ohio and the United States:

	Ohio	U.S.
Number of radios per 100 schools	46.3	14.0
Number of central sound systems per 100 schools	5.4	1.0
Number of phonographs per 100 schools	86.0	46.3
Number of records per school	16.0	8.9[5]

Thus we see that in 1936 radio and sound equipment was two or three times as common in the schools of Ohio as in the

[4] *Statistics of the State School Systems, 1937–38.* Washington, D. C.: Government Printing Office, 1941. pp. 29, 89–90, 134. (United States Office of Education, Bulletin 1940, No. 2)

[5] Koon and Noble, *op. cit.*, p. 12.

schools of the nation. There is no reason to believe that the proportion has changed substantially during the past five years.

Finally, there is the fact that school broadcasts were available in Ohio more frequently than was true in most states. During 1940–41 the five series of the American School of the Air were broadcast regularly by three stations of the Columbia Broadcasting System in Ohio and by the Board of Education station in Cleveland, the Damrosch series by four stations of the National Broadcasting Company, the five series of the Ohio School of the Air by Station WOSU, and regular programs for classroom consumption by school systems in Akron, Cleveland, Toledo, Zanesville, and various other communities.

In view of these five reasons, then, we think it reasonable to maintain that Ohio schools were more advanced in the use of radio than were schools throughout the country. We suggest this fact be remembered in any application of the Ohio percentages to the schools and classrooms of the United States: that such percentages, in all probability, constitute an overly optimistic picture of the nation-wide use of radio in schools.

Finally, for readers interested in a succinct summary of our findings, we present these figures in question-and-answer form:

	Yes (Per Cent)	No (Per Cent)
Do schools have radios?	54.6	45.4
Do schools have central radio sound systems?	11.5	88.5
Do schools have equipment for playing recordings?	37.4	62.6
Do schools have transcription players?	7.6	92.4
Do schools have recorders?	4.6	95.4
Do schools use school broadcasts?	15.1	84.9
Do schools have radio workshops?	2.7	97.3
Do schools have radio courses or units?	14.9	85.1
Do schools use out-of-school broadcasts?	77.5	22.5
Do schools have students participating in radio programs?	13.4	86.6

We hope, quite naturally, that readers will not stop here, but will study the entire report, especially the section outlining our conclusions and recommendations. More important, we hope that this survey of radio in the schools of Ohio will provide a basis for constructive and imaginative progress in radio education, not only in Ohio but throughout the United States. As we show repeatedly in this report, radio is still an infant in the education family. To some enthusiasts of radio the facts will be distasteful and discouraging. To those sincerely interested in the development of radio in education, we hope these same facts will be a stimulus and a challenge.

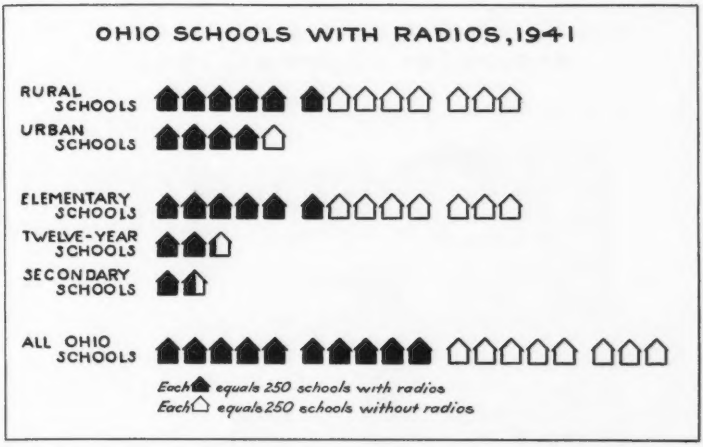
II. Radio and Sound Equipment

In the matter of equipment we have the crux of the problem of introducing and developing radio in school. Without radio receiving sets, teachers cannot use school broadcasts in their classrooms; without record and transcription players, they cannot make use of educational recordings; without radio and sound equipment, teachers sincerely interested in the educational possibilities of radio can make only half-hearted attempts to incorporate radio into their classroom procedures.

What is the situation in Ohio? Do schools have radio and sound equipment? Are there radios available for classroom listening to broadcasts, transcription players for group listening to recordings, and the other equipment, such as recorders and microphones and loud-speakers, necessary to a well-rounded program of radio education? Frankly, the answer is "No." To summarize the data presented on the following pages: Only 55 per cent of the schools of Ohio have radio receiving sets, only 12 per cent have central radio sound systems, only 37 per cent have equipment for playing records and recordings, only 8 per cent have transcription players, and only 5 per cent have recorders. Perhaps this could be called a pessimistic interpretation and critics insist on our emphasizing such statements as these: that more than half of the schools in Ohio have radios, or that one Ohio school in twelve has a transcription player. Whichever interpretation is made, there can be no doubt of one thing: there is room for improvement.

In all fairness to Ohio, two items should be mentioned. First, during the five years from 1936 to 1941[1] there was a 100–per cent increase in the number of Ohio schools with radios, an increase and a rate of increase indicating progress and forecasting continued progress. Second, even though the 1941 figures for Ohio schools seem small in contrast to the proportion of homes with radios, we should recognize that Ohio, insofar as the schoolroom use of radio is concerned, is certainly one of the most advanced states in the Union. Slightly more than half the schools of Ohio had radios in 1941, but less than half the schools of the United States had radios.

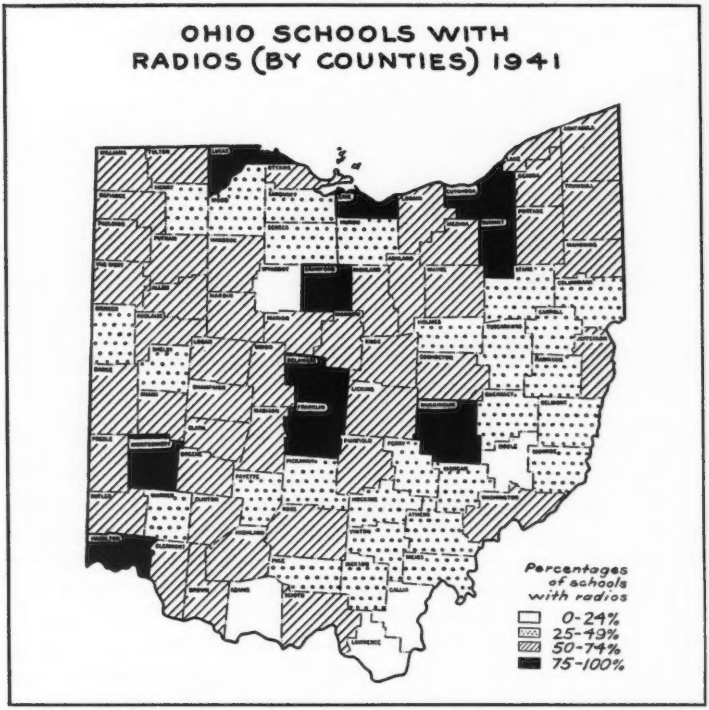
[1] For the 1936 data *see* Koon and Noble, *op. cit.*, p. 12.



In 1941 there were approximately twenty-five hundred Ohio schools with radio receiving sets—55 per cent of the schools of the state; 46 per cent of the rural schools and 77 per cent of the urban schools; 46 per cent of the elementary schools, 75 per cent of the twelve-year schools, and 78 per cent of the secondary schools. While over half the Ohio schools had radios, only one-sixth of the one-room schools throughout the state had this communication with the outside world.

One-fifth of the twenty-five hundred Ohio schools with radio receiving equipment had central sound systems with facilities for transmitting radio programs simultaneously to many classrooms. Excluding the loud-speakers of the central sound systems, schools with radios had an average of two receiving sets per school. The average number of sets per school was greater in urban schools (2.2) than in rural schools (1.6), but approximately the same in elementary and secondary schools. Three-fourths of the radios could be moved from room to room, and over 99 per cent of the sets operated from electric-light current.

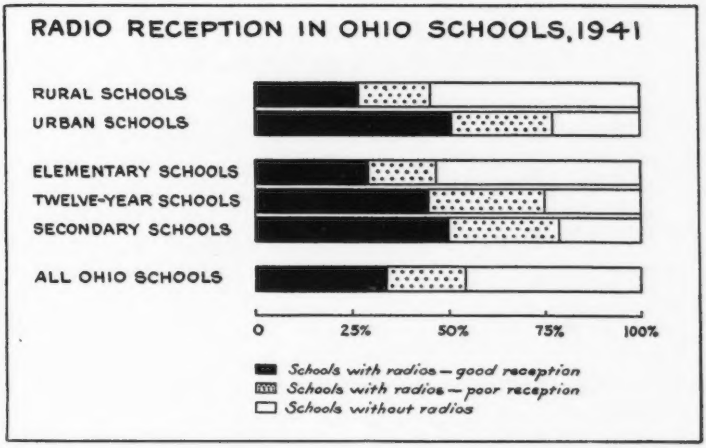
We feel these two facts are of primary importance to educators: that 45 per cent of the schools of Ohio and 83 per cent of the one-room schools of the state have no radios. In time of emergency, nearly half the schools of the state, and particularly those schools in isolated regions, could not be reached through radio broadcasts.



As can be seen from this map, radios were most common in the schools of the following counties: Crawford, Cuyahoga, Delaware, Erie, Franklin, Hamilton, Lucas, Montgomery, Muskingum, and Summit. Of these ten counties, Cuyahoga schools had the highest proportion (92 per cent).

In 10 counties, then, over three-fourths of the schools had radios; in 46 counties, between one-half and three-fourths of the schools had radios; in 27 counties, between one-fourth and one-half of the schools had radios; and in 5 counties, less than a fourth of the schools had radios.

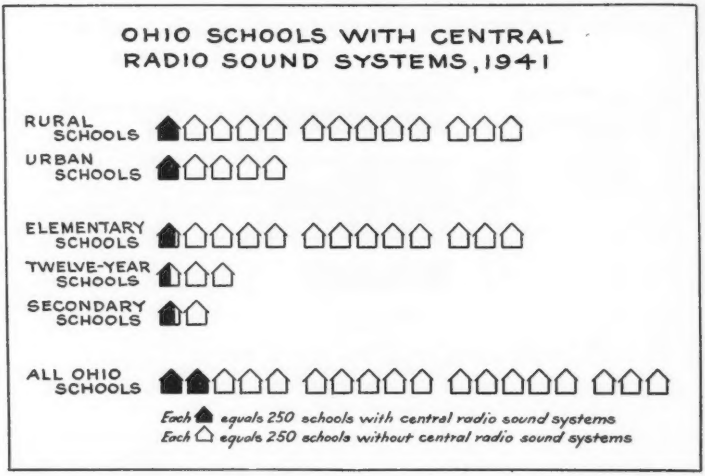
Most of the areas in which school possession of radios was most frequent were counties with large cities: Cuyahoga (Cleveland), Franklin (Columbus), Hamilton (Cincinnati), Lucas (Toledo), Montgomery (Dayton), and Summit (Akron), another indication of the fact that schools in urban areas more often have radios than schools in rural areas.



As we pointed out earlier, 45 per cent of the schools of Ohio had no radios in 1941. Of those schools with radios, nearly two-fifths (38 per cent) reported reception difficulties other than those of unavoidable atmospheric disturbances, and we want to underscore the fact that students in only a third of the schools of the state could consistently hear radio programs clearly and distinctly. The implications of this fact during the present national emergency must be apparent to all educators.

In rural areas 27 per cent of the schools had radios and good reception, 19 per cent had radios but poor reception, and 54 per cent lacked radios; in urban areas 51 per cent of the schools had radios and good reception, 26 per cent had radios but poor reception, and 23 per cent were without radios. In both rural and urban regions, it should be noted, half the schools lacked the radio equipment with which to hear radio broadcasts clearly and distinctly.

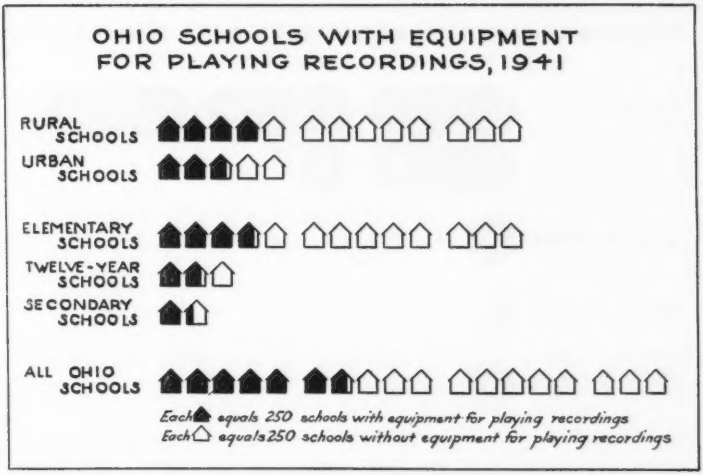
Various reasons were given for the lack of clear radio reception, but these four were mentioned most frequently: radio sets too small to pull in distant stations and programs not available on near-by stations; radio sets in need of repair; radio sets lacking ground connections or antennas; various disturbances caused by electrical equipment in or near the school building. Most of the difficulties mentioned by principals could be eliminated without much expense.


OHIO SCHOOLS WITH CENTRAL RADIO SOUND SYSTEMS, 1941
RURAL SCHOOLS
URBAN SCHOOLS
ELEMENTARY SCHOOLS
TWELVE-YEAR SCHOOLS
SECONDARY SCHOOLS
ALL OHIO SCHOOLS
Each ⌂ equals 250 schools with central radio sound systems
Each ⌂ equals 250 schools without central radio sound systems

In 1941 there were approximately five hundred Ohio schools equipped with central radio sound systems—11 per cent of the schools of the state; 8 per cent of the rural schools and 19 per cent of the urban schools; 6 per cent of the elementary schools, 19 per cent of the twelve-year schools, and 34 per cent of the secondary schools. Quite obviously, none of the one-room schools reported such equipment.

In those schools with central radio sound systems, 89 per cent of the classrooms were equipped with loud-speakers, 76 per cent of the auditoriums, and 69 per cent of the gymnasiums. There were, on the average, nineteen loud-speakers per school. In 87 per cent of the schools, the central-control cabinet was placed in the principal's office, and in only 10 per cent of the schools was it placed in a special radio room.

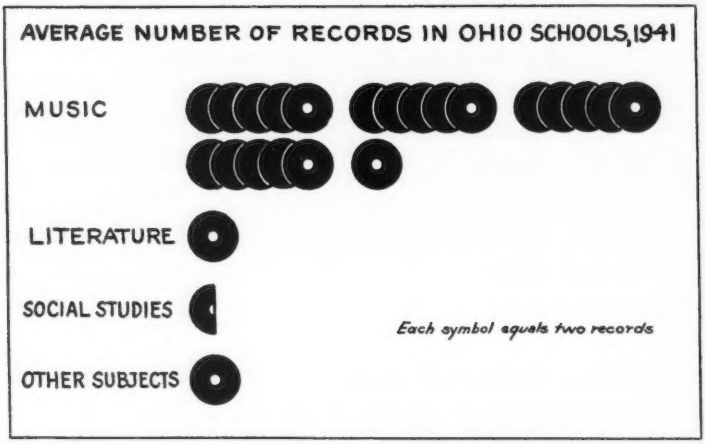
Schools with central sound systems listed the following uses made of the equipment: reception of radio programs for classroom listening, 74 per cent; broadcasting of administrative announcements, 71 per cent; broadcasting of talks and speeches, 62 per cent; broadcasting of student dramatizations, 55 per cent; broadcasting of recorded programs, 39 per cent. Although three-fourths of the schools with central sound systems reported classroom listening to radio programs, only one-third of these schools reported using the equipment for regular listening to school broadcasts.


OHIO SCHOOLS WITH EQUIPMENT
FOR PLAYING RECORDINGS, 1941
RURAL SCHOOLS
URBAN SCHOOLS
ELEMENTARY SCHOOLS
TWELVE-YEAR SCHOOLS
SECONDARY SCHOOLS
ALL OHIO SCHOOLS
Each ● equals 250 schools with equipment for playing recordings
Each ○ equals 250 schools without equipment for playing recordings

In 1941 there were approximately seventeen hundred Ohio schools with equipment for playing recordings—37 per cent of the schools of the state; 31 per cent of the rural schools and 53 per cent of the urban schools; 29 per cent of the elementary schools, 56 per cent of the twelve-year schools, and 68 per cent of the secondary schools. Only 6 per cent of the one-room schools had such equipment.

Only a fifth of the schools with equipment had machines capable of playing 16-inch transcriptions at a speed of 33⅓ revolutions per minute (r.p.m.) On the other hand, almost all the seventeen hundred schools indicated that their machines could handle 10- and 12-inch records playing at a speed of 78 r.p.m. In half the schools the equipment was a portable unit complete within itself, in 30 per cent of the schools it was part of a radio, and in 20 per cent of the schools, part of a central sound system.

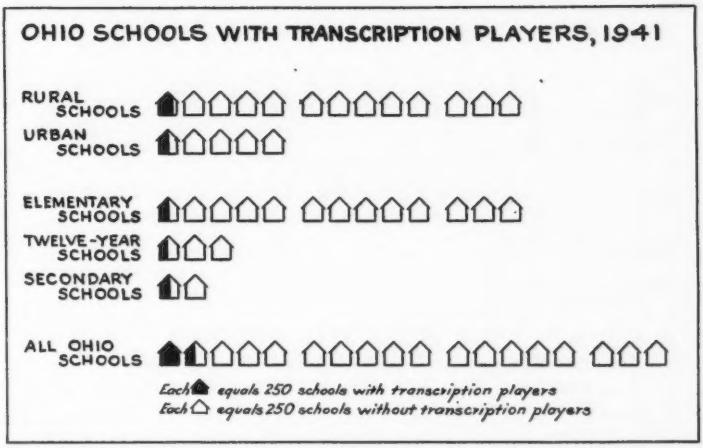
A word, perhaps, should be said of a possible ambiguity concerning this question of record players. Most of us would say that nearly every school has a phonograph, an instrument which can certainly be classed as "equipment for playing recordings." Yet we found only 37 per cent of the Ohio schools with such equipment. Probably the best explanation is that many schools with phonographs in closets and in storerooms failed to mention them as "equipment for playing recordings."



Clearly and unmistakably, the vast majority of records and recordings owned by schools were in the field of music. There were, on the average, approximately 47 records in those schools with record-playing equipment: of these 47 records, 42 were music records. As can be seen in the chart, schools reported an average of only two records usable in literature classes, only one in social-studies classes. Interestingly, very few schools reported records applicable in foreign-language classes, in science classes, or in speech classes.

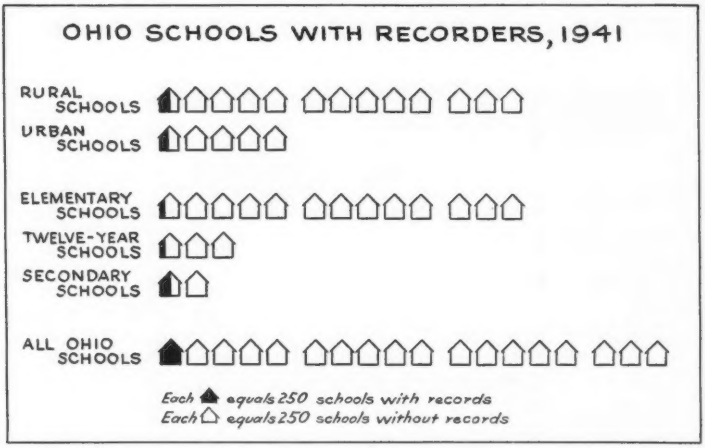
Unfortunately, such subjects as physical education, folk dancing, and social dancing were not listed in the questionnaire. Despite this omission, many schools voluntarily reported records in such areas, and it seems reasonable to assume that, on the average, schools had as many records usable in physical education or in folk and social dances as they had records applicable to literature or social-studies classes.

In rural schools there were approximately 35 records per school; in urban schools, approximately 60 records per school. In one-room schools there were about 25 records per school. In elementary schools there were approximately 45 records per school; in twelve-year schools, about 35 records per school; and in secondary schools, 65 records per school. In all types of schools, however, over three-fourths of the records were in the field of music; very few records were found in other subject-matter areas.



Approximately three hundred fifty of the schools of Ohio in 1941 had equipment for playing 16-inch transcriptions at a speed of 33⅓ r.p.m.—8 per cent of the schools of the state; 6 per cent of the rural schools and 11 per cent of the urban schools; 4 per cent of the elementary schools, 13 per cent of the twelve-year schools, and 22 per cent of the secondary schools. Not a single one-room school in the survey reported having such equipment.

In view of the argument sometimes advanced that transcription players are the "answer" to time-schedule difficulties which prevent classroom listening to school broadcasts, it is interesting to note that 27 per cent of the schools with transcription players used school broadcasts as against only 15 per cent of Ohio schools in general. As for secondary schools, toward which the argument for transcription listening replacing broadcast listening is most commonly directed, the difference was even more pronounced: 33 per cent of the secondary schools with transcription players used school broadcasts, only 12 per cent of Ohio secondary schools. Evidently classroom listening to school broadcasts occurs more frequently in schools with transcription players than in schools without such equipment. This relationship seems perfectly understandable; schools genuinely interested in audio aids and in radio education make use of both broadcasts and transcriptions. Neither is a substitute for the other.



Approximately two hundred schools in Ohio had recorders in 1941—5 per cent of the schools of the state; 4 per cent of the rural schools and 7 per cent of the urban schools; 1 per cent of the elementary schools, 8 per cent of the twelve-year schools, and 21 per cent of the secondary schools. None of the one-room schools reported having such equipment.

Of these schools with recorders, only a third had machines which would record at a speed of 33⅓ r.p.m. and only a fifth of them had machines capable of handling 16-inch discs. Almost all the recorders which could handle 16-inch discs at a speed of 33⅓ r.p.m. were in secondary schools, only a few in elementary schools.

In nine-tenths of the schools with recorders, the machine was a separate unit complete in itself; in a tenth of the schools, it was part of the central sound system.

The most frequent use made of the equipment was that of recording students' speech and musical performances; nearly nine-tenths of the schools with recorders listed these activities. The recording of radio broadcasts for future classroom listening was mentioned by approximately half the schools.

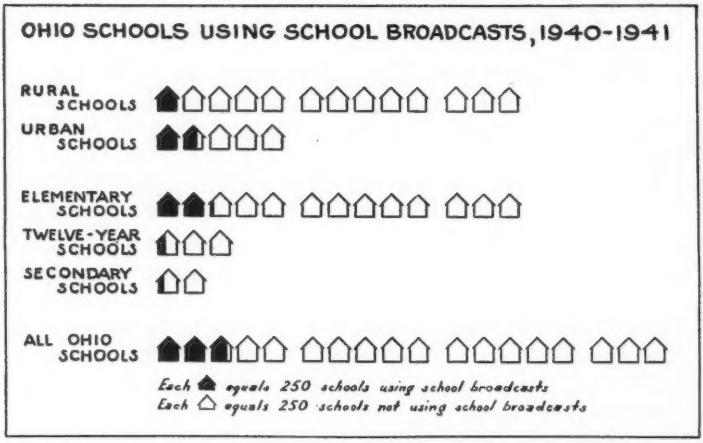
III. Classroom Use of School Broadcasts

SCHOOL broadcasts have been on the air in Ohio for over a dozen years. The Ohio School of the Air was first broadcast over Station WLW in 1929 under the direction of Ben Darrow, the Damrosch broadcasts were first presented by the National Broadcasting Company in 1929, and the American School of the Air of the Columbia Broadcasting System was started in 1930. During the last decade many claims and counterclaims have been made for the classroom audience of school broadcasts, reaching a high of two out of five students listening to the American School of the Air.[1] Needless to say, this estimate is fantastic.

What is the situation in Ohio and, inferentially, throughout the United States? Each year thousands of dollars are spent in the production and presentation of radio broadcasts for classroom consumption. Do teachers and students listen to these radio broadcasts of the networks, universities, and school systems? Are the broadcasts used primarily in rural schools or in urban schools? In elementary schools or secondary schools? What is the situation in one-room schools? What types of radio programs are most popular? What factors promote the classroom use of school broadcasts? What factors prevent teachers from using school broadcasts?

To those individuals interested in the classroom audience in the United States as well as in Ohio, we emphasize that listening occurred more frequently in Ohio than in the country as a whole. Radios are more common in Ohio schools than in schools nationally, and school broadcasts are more available in Ohio than in most states. During 1940–41 the five series of the American School of the Air were broadcast over four Ohio stations, the Damrosch series over four stations, the Ohio School of the Air over the Ohio State University station, WOSU, and various series of local broadcasts over stations in Akron, Cleveland, Toledo, Zanesville, and other cities. In view of these considerations, we say that the percentages for Ohio, as low as they may seem to some readers, are higher than those prevailing throughout the United States as a whole.

[1] *New York Times*, February 23, 1941.

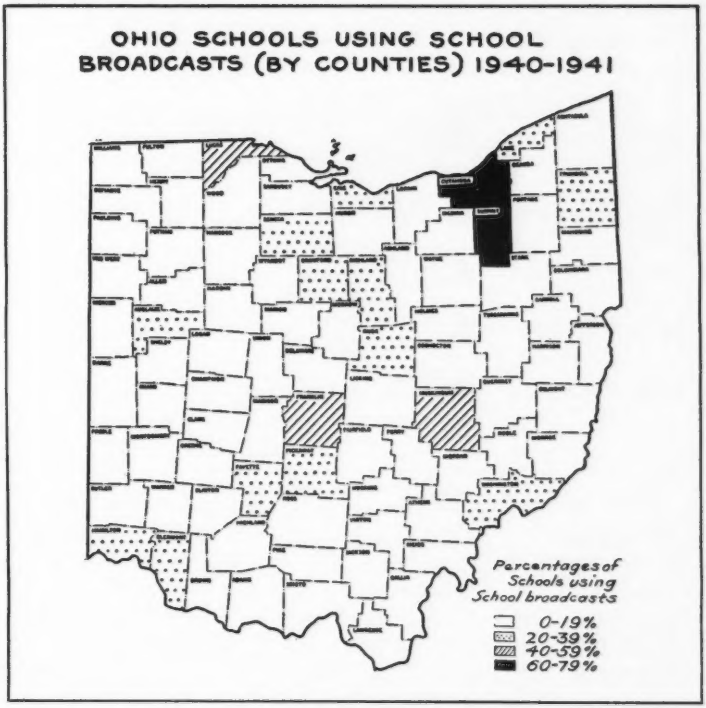

OHIO SCHOOLS USING SCHOOL BROADCASTS, 1940-1941
RURAL SCHOOLS
URBAN SCHOOLS
ELEMENTARY SCHOOLS
TWELVE-YEAR SCHOOLS
SECONDARY SCHOOLS
ALL OHIO SCHOOLS
Each ⌂ equals 250 schools using school broadcasts
Each ⌂ equals 250 schools not using school broadcasts

During 1940–41 teachers and students in approximately seven hundred Ohio schools used school broadcasts regularly—in 15 per cent of the schools of the state; 8 per cent of the rural schools and 32 per cent of the urban schools; 16 per cent of the elementary schools, 12 per cent of the twelve-year schools, and 12 per cent of the secondary schools. Broadcasts were used in only 2 per cent of the one-room schools of the state.

These data refer to the proportion of Ohio schools in which one or more series of school broadcasts were used in one or more classrooms. The proportions of Ohio teachers and students listening to individual series of broadcasts are shown on pages 133 and 135.

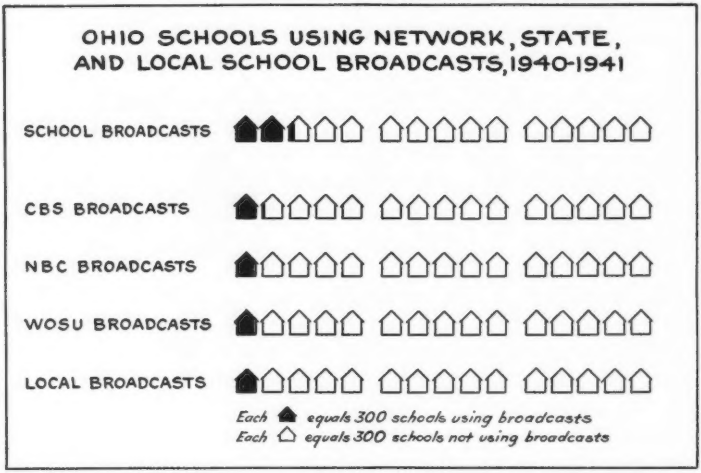
Approximately 85 per cent of the listening to school broadcasts was done in classrooms by class groups, 7 per cent in auditoriums by groups of less than fifty, and 8 per cent in auditoriums by groups of more than fifty.

We consider these two facts concerning school broadcasts especially significant: that elementary schools far more than secondary schools used such broadcasts in the classroom, and that only 2 per cent of the one-room schools used such broadcasts. Approximately one-fifth of the schools in Ohio and one-half the schools in the United States are one-room schools, and it is in these schools that radio broadcasts can be particularly valuable in stimulating educational activities and enriching the curricular experiences of boys and girls.



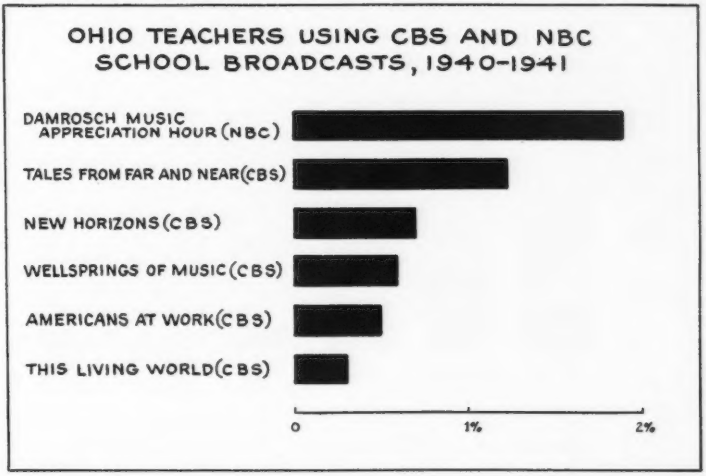
Even a glance at this county map of Ohio will show where there was the greatest amount of classroom listening to school broadcasts: Summit (61 per cent), Cuyahoga (60 per cent), Lucas (54 per cent), Franklin (50 per cent), and Muskingum (45 per cent). The major reasons seem clear: First, in these counties radios were available in more than three-fourths of the schools as contrasted to a state-wide average of only 55 per cent. Second, most of the radio stations broadcasting school programs were in these counties. Third, the school systems of Cleveland, Akron, Toledo, and Zanesville produced series of school broadcasts specifically designed for local classroom listening.

In thirteen counties, between 20 per cent and 40 per cent of the schools used school broadcasts. In all the other seventy counties of Ohio, however, school broadcasts were used in less than a fifth of the schools.


OHIO SCHOOLS USING NETWORK, STATE, AND LOCAL SCHOOL BROADCASTS, 1940-1941
SCHOOL BROADCASTS
CBS BROADCASTS
NBC BROADCASTS
WOSU BROADCASTS
LOCAL BROADCASTS
Each ⌂ equals 300 schools using broadcasts
Each ⌂ equals 300 schools not using broadcasts

There was little difference, during 1940–41, in the number of Ohio schools in which teachers used the broadcasts of the radio networks, the state university, and local school systems. Broadcasts of the American School of the Air were used in 7 per cent of Ohio schools, the Damrosch Music Appreciation series in 6 per cent of the schools, the Ohio School of the Air in 6 per cent of the schools, and local broadcasts in 7 per cent.

From one point of view, there was little difference in the school audience to these four kinds of broadcasts: approximately 80 per cent of the schools using C.B.S., N.B.C., WOSU, and local broadcasts were elementary schools. On the other hand, there were distinct differences in the proportion of rural and urban schools using the broadcasts. Of the schools using Columbia broadcasts, 33 per cent were rural and 67 per cent urban; N.B.C. broadcasts, 40 per cent rural and 60 urban; WOSU broadcasts, 56 per cent rural and 44 per cent urban; local broadcasts, 27 per cent rural and 73 per cent urban. It is interesting and significant, too, that radio programs produced by city school systems "spilled over" political boundaries into some rural schools. Air waves are not blockaded by political subdivisions, a fact which has long been recognized by commercial and political broadcasters, and one which must be recognized by educators.

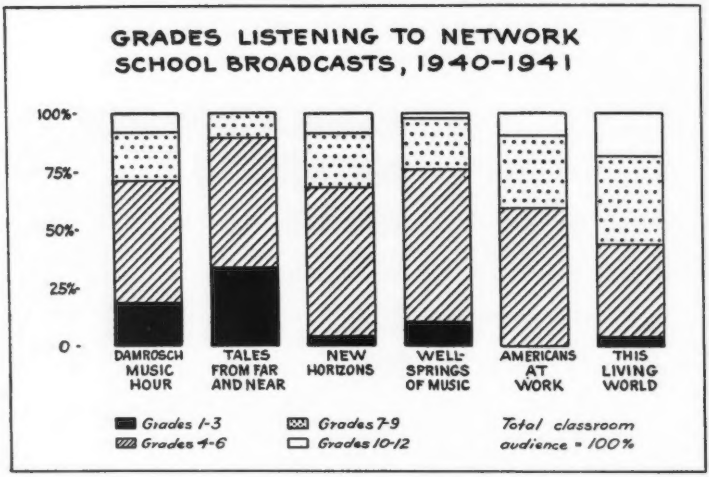


The bars in this figure show the percentages of Ohio teachers who listened regularly during 1940–41 to each series of C.B.S. and N.B.C. school broadcasts: Damrosch Music Appreciation Hour, 1.9; Tales from Far and Near, 1.2; New Horizons, 0.7; Wellsprings of Music, 0.6; Americans at Work, 0.5; This Living World, 0.3. Applying these percentages to the 1,224,000 students in Ohio schools, we have these estimates of the number of classroom listeners:

Damrosch Music Hour	23,000	Wellsprings of Music	7,000
Tales from Far and Near	15,000	Americans at Work	6,000
New Horizons	9,000	This Living World	4,000

We might note that these figures cannot be totaled, since adding the six figures would be counting some listeners twice or even thrice. From observation and questionnaire data, we would say that teachers who use school broadcasts listen, on the average, to two series.

Two reasons probably explain the comparative popularity of the Damrosch series: the prestige these programs have acquired over a dozen years and the hour broadcasts as contrasted to the half-hour broadcasts of the American School of the Air series. The relative popularity of Tales from Far and Near seems due primarily to one fact, that this series of story programs was aimed at elementary-school listeners.

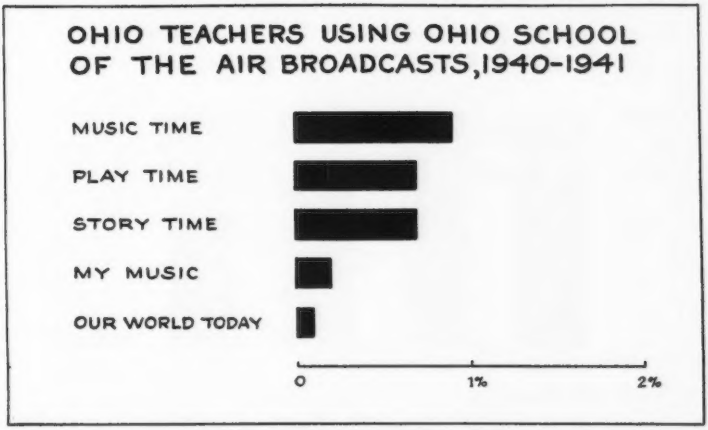


For the most part, as can be seen in this chart, the classroom audience listening to the various network series was located in Grades I to VI, a substantiation of the fact repeatedly demonstrated that by far the major part of classroom listeners are in elementary schools. A previous study showed much the same grade distribution of classroom listeners.[2]

The Damrosch broadcasts really consisted of four series, each one intended for a different audience. Unfortunately, we do not have data concerning the classroom listeners to each of these four series so that the Damrosch data cannot be interpreted accurately.

On the other hand, each of the five American School of the Air series was directed, presumably, at a specific group of grades, and, for the most part, the actual classroom audience was made up of listeners in those grades. For example, New Horizons, Wellsprings of Music, and Americans at Work were designated for Grades IV–IX; for all three series, over 80 per cent of the listeners were in this span of grades. Tales from Far and Near, however, designated for Grades IV–IX, had only 65 per cent of the classroom listeners in these grades, and This Living World, for Grades VII–XII, only 56 per cent of the listeners in these secondary-school classrooms.

[2] *See* Reid, "The Classroom Audience of Network School Broadcasts," *loc. cit.*

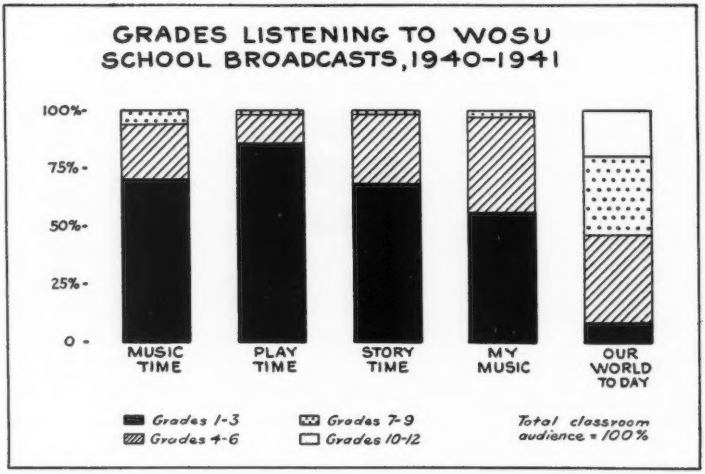


The bars in this figure show the percentage of Ohio teachers who listened regularly during 1940–41 to each of five series of broadcasts of the Ohio School of the Air. Note that none of the five series was used by as many as 1 per cent of the teachers. For each series, the percentage of classroom listeners was as follows: Music Time, 0.9; Play Time, 0.7; Story Time, 0.7; My Music, 0.2; Our World Today, 0.1. Applying these percentages to the 1,224,000 students in Ohio schools, we have these estimates of the number of classroom listeners:

Music Time	11,000	My Music	2,000
Play Time	9,000	Our World Today	1,000
Story Time	9,000		

Again we must recognize that duplication of listeners prevents us from simply adding these figures to obtain an estimate of the Ohio School of the Air classroom audience. We should point out that the educational broadcasts of Station WOSU were not limited to the Ohio School of the Air series but included musical programs, foreign-language lessons, news interpretations, and various other broadcasts intended primarily for home listeners. We have no data upon classroom listeners to these broadcasts.

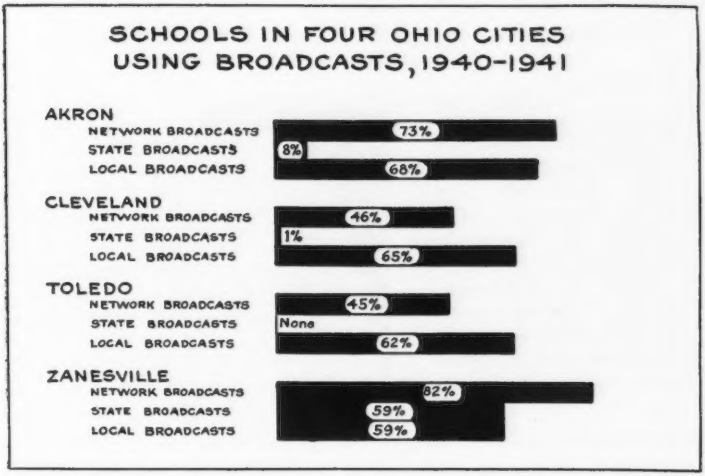
We consider it significant that the only series of the five intended for secondary-school students, Our World Today, had the smallest audience, just as This Living World had the smallest audience of any network series.



The fact that the Ohio School of the Air programs during 1940–41 were aimed primarily at elementary-school listeners is clear in this chart. With the exception of the series, Our World Today, over half of the classroom listeners of these WOSU broadcasts were in Grades I–III and over nine-tenths were in Grades I–VI.

We think it significant and unfortunate, too, that nearly half the classroom listeners to the secondary-school series, Our World Today, were in Grades I–VI (just as the C.B.S. series, This Living World, had as many listeners in elementary schools as in secondary schools). For the most part, however, the Ohio School of the Air broadcasts were used in those grades for which they were intended. For example, Music Time, Play Time, and Story Time were designed and designated for children in the primary grades, and 71 per cent of the classroom listeners to Music Time, 86 per cent of the listeners to Play Time, and 69 per cent of the listeners to Story Time were in these grades. It seems clear that these three series were used primarily in those grades for which they were most appropriate.

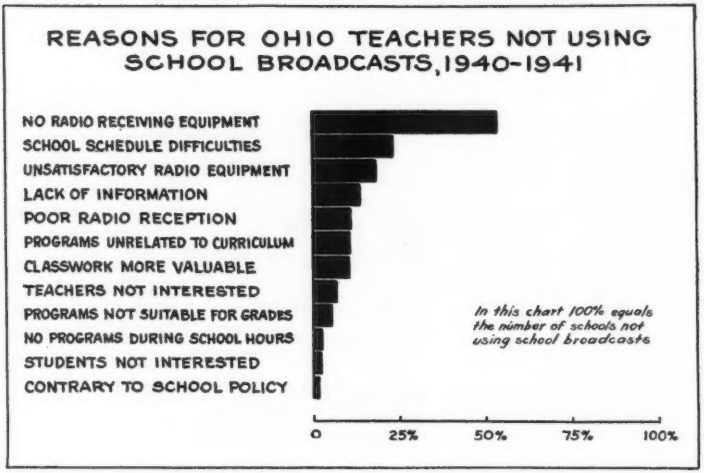
We call attention, however, to the spread of the audience to both the network and the WOSU broadcasts, and to the apparent need for the education of teachers in the classroom use of radio.



During 1940–41 there were four Ohio school systems regularly producing various series of radio programs for classroom consumption: Akron, Cleveland, Toledo, and Zanesville. It was in these cities that school broadcasts were most used.

Interestingly, teachers in these four city school systems, in which local broadcasts were available, used network broadcasts as well as local broadcasts—and much more frequently than did teachers in other school systems, indicating that concentrated local efforts in radio education stimulate an audience for network programs. Rather than competitors for classroom audiences, network and local broadcasts were complementary parts of a program of radio education. That the Ohio School of the Air programs were not used in Akron, Cleveland, and Toledo schools seems attributable to one fact: the distance of these cities from Station WOSU in Columbus.

In Akron, Toledo, and Zanesville there was a marked difference between the proportion of elementary and secondary schools using broadcasts, with very few secondary schools using radio programs. In Cleveland, however, approximately two-thirds of both elementary and secondary schools used the broadcasts of Station WBOE, a tribute to the program of radio education in Cleveland and a fact of significance to those who maintain that school broadcasts cannot overcome the rigidity of secondary-school time schedules.



By far the most important reason for teachers not using school broadcasts was lack of equipment: over half the schools in Ohio not using broadcasts had no radios. In addition to the schools without radios, one-fifth of the schools not using broadcasts indicated that the radio equipment was unsatisfactory. We emphasize the fact, therefore, that nearly three-fourths of the schools not using school broadcasts lacked the basic requirement for the use of such broadcasts, namely, satisfactory equipment with which to hear radio programs.

Of the rural schools not using school broadcasts, 59 per cent had no radios; of the urban schools only 34 per cent gave this reason. Of the elementary schools not using broadcasts, 64 per cent had no radios; of the secondary schools only 24 per cent gave this explanation.

A second reason for teachers' not using school broadcasts was that of schedule difficulties, named by 24 per cent of the schools. As could have been predicted, this condition prevailed more in secondary schools than in elementary schools. Likewise, such reasons as "programs not related to curriculum" or "teachers not interested" were mentioned more frequently by secondary schools than by elementary schools. We feel that it is significant and encouraging, too, that very few principals reported lack of interest on the part of students or explained that listening to school broadcasts was contrary to school policy.

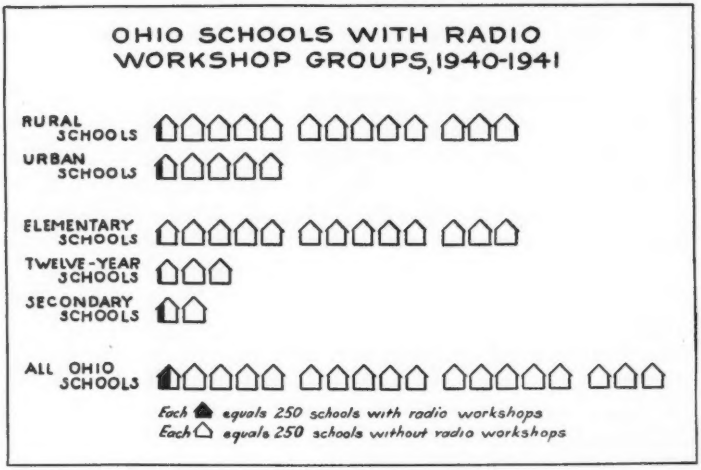
IV. Other Uses of Radio in School

It is unfortunate and somewhat discouraging that so few teachers and students listened to school broadcasts during 1940–41. But classroom listening to school broadcasts is not the only way in which teachers and principals can use the resources of radio in improving curricular practices. There are on the air every evening and during week ends dozens of excellent radio programs—symphony orchestras and swing bands, dramatic productions, news reports and interpretations, variety programs, discussions and forums. These programs are available to almost all students and can be used by imaginative teachers as stimulants and supplements to classroom procedures.

There are the techniques of radio production, the creative possibilities for English, speech, and dramatics teachers in developing students' interest in radio writing and radio production. Here the possibilities are broader than any subject-matter area, for almost any teacher can use the techniques of radio to stimulate interest on the part of students. Thus a social-studies teacher can enliven the day devoted to current events by encouraging a classroom production of the March of Time, or a mathematics teacher can increase interest in a review by developing a contest patterned after one of the quiz programs on the air.

Then there is the content of radio, not the content of specific broadcasts but of radio itself. Mathematics and science teachers discuss the technical aspects of radio, the why and how of radio transmission. Industrial-arts and shop teachers touch upon the construction and repair of radio transmitters and receivers. Drama and speech teachers spend some time upon radio as a dramatic form and as a communicative medium. Social-studies teachers examine the place of radio in America, the questions of ownership, control, censorship, propaganda, and social policy.

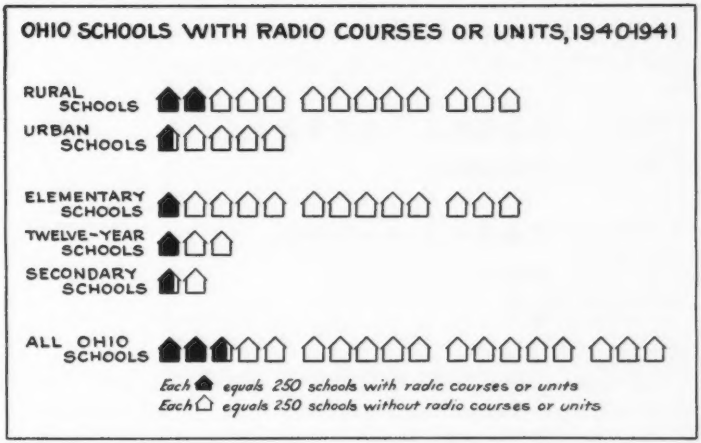
There are in many schools the opportunity and the responsibility of presenting public-service programs over local radio stations, thus giving to a few students the actual experience of radio broadcasting. Even when schools do not sponsor or present programs, there are some students—only a few, of course—who take part in the production of commercial or sustaining broadcasts.


OHIO SCHOOLS WITH RADIO WORKSHOP GROUPS, 1940-1941
RURAL SCHOOLS
URBAN SCHOOLS
ELEMENTARY SCHOOLS
TWELVE-YEAR SCHOOLS
SECONDARY SCHOOLS
ALL OHIO SCHOOLS
Each ⌂ equals 250 schools with radio workshops
Each ⌂ equals 250 schools without radio workshops

Approximately one hundred twenty-five schools in Ohio had radio dramatic or workshop groups in 1941—3 per cent of the school of the state; 2 per cent of the rural schools and 5 per cent of the urban schools; 1 per cent of the elementary schools, 4 per cent of the twelve-year schools, and 14 per cent of the secondary schools. None of the one-room schools reported such workshop groups, another substantiation of the generalization that radio is seldom used in the curricular activities of one-room schools.

It is understandable that radio workshops were organized more often in secondary schools than in elementary schools, but we think it significant that such workshops were carried on in some 25 Ohio elementary schools. Dramatic and creative activities in radio are not limited to the high school.

On the average, there were 40 students in each of these workshop groups with, of course, variations among individual schools and differences between types of schools: in rural schools 33 students, in urban schools 43 students; in elementary schools 35 students, in twelve-year schools 32 students, and in secondary schools 44 students. Throughout the state there were approximately five thousand students in these dramatic or workshop groups, a sizable number until one remembers that even five thousand students constitute less than one-half of 1 per cent of the school population of Ohio.

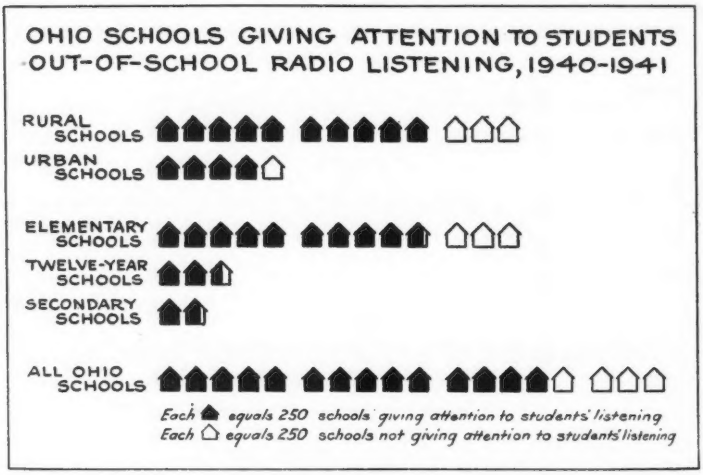

OHIO SCHOOLS WITH RADIO COURSES OR UNITS, 1940-1941
RURAL SCHOOLS
URBAN SCHOOLS
ELEMENTARY SCHOOLS
TWELVE-YEAR SCHOOLS
SECONDARY SCHOOLS
ALL OHIO SCHOOLS
Each ⌂ equals 250 schools with radio courses or units
Each ⌂ equals 250 schools without radio courses or units

Approximately seven hundred Ohio schools had radio units or radio courses in their curriculums in 1941—15 per cent of the schools of the state; 15 per cent of the rural schools and 15 per cent of the urban schools; 7 per cent of the elementary schools, 35 per cent of the twelve-year schools, and 37 per cent of the secondary schools. Interestingly and surprisingly, too, there were many more rural schools with radio units in the curriculum than there were urban schools.

These schools contained curricular units in radio in various fields of subject-matter. Following are estimates of the number of Ohio schools with radio units in different curricular subjects:

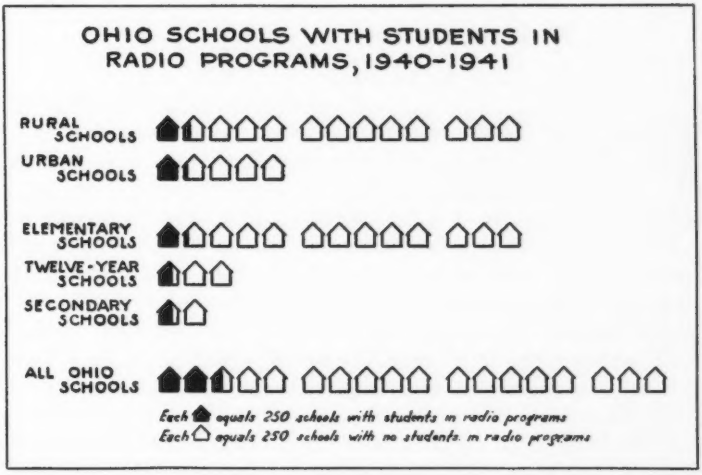
Science and mathematics	490	Industrial arts	90
English	120	Music	60
Speech and dramatics	100	Foreign languages	10
Social studies	90		

Clearly and unmistakably, most of the radio units and courses were technical ones in the theory and operation of radios and comparatively few were focused upon the appreciative, social, and creative aspects of radio. Interestingly, only a few schools reported radio units in music, yet music constitutes the major type of radio program broadcast day after day to the American people. Evidently the teachers of the foreign languages pay little attention to recent developments in short-wave broadcasts, for only ten schools in Ohio indicated that there were radio units in foreign-language courses.


OHIO SCHOOLS GIVING ATTENTION TO STUDENTS OUT-OF-SCHOOL RADIO LISTENING, 1940-1941
RURAL SCHOOLS
URBAN SCHOOLS
ELEMENTARY SCHOOLS
TWELVE-YEAR SCHOOLS
SECONDARY SCHOOLS
ALL OHIO SCHOOLS
Each ⌂ equals 250 schools giving attention to students' listening
Each ⌂ equals 250 schools not giving attention to students' listening

In approximately thirty-five hundred Ohio schools during 1940–41 teachers gave some attention to the radio listening of students—in 78 per cent of the schools of the state; 76 per cent of the rural schools and 81 per cent of the urban schools; 75 per cent of the elementary schools, 86 per cent of the twelve-year schools, and 84 per cent of the secondary schools.

The most common practice was that of recommending radio programs to students—carried on by one or more teachers in 69 per cent of Ohio schools. Next was that of discussing radio programs in class—in 57 per cent of Ohio schools. The amount of time given to these activities varied, of course, from school to school and from classroom to classroom. Probably most of the teachers mentioned radio programs only occasionally and then merely in an advisory capacity. Thus a music teacher may have suggested that students listen to the New York Philharmonic programs on Sunday afternoons, or an English teacher may have mentioned the Great Plays series of the National Broadcasting Company, or any teacher may have posted a list of recommended programs on the bulletin board. This impression of ours is based upon frequent observations and upon the fact that the practice of assigning out-of-school radio listening, thus placing the activity upon an equal footing academically with that of out-of-school assigned reading, was carried on in only 4 per cent of Ohio schools.


OHIO SCHOOLS WITH STUDENTS IN RADIO PROGRAMS, 1940-1941
RURAL SCHOOLS
URBAN SCHOOLS
ELEMENTARY SCHOOLS
TWELVE-YEAR SCHOOLS
SECONDARY SCHOOLS
ALL OHIO SCHOOLS
Each ⌂ equals 250 schools with students in radio programs
Each ⌂ equals 250 schools with no students in radio programs

Students in approximately six hundred Ohio schools took part at one time or another during the year in presenting radio programs over local stations—in 13 per cent of the schools of the state; in 10 per cent of the rural schools and 22 per cent of the urban schools; in 9 per cent of the elementary schools, 22 per cent of the twelve-year schools, and 32 per cent of the secondary schools. Even in the one-room schools of Ohio there were some students who had this radio experience.

We have no way of estimating accurately the number of Ohio schools which presented, using student talent, public-service broadcasts over local radio stations. Some of the six hundred schools undoubtedly presented broadcasts designed to portray to the general public the work and functions of the school, and other schools sponsored and produced safety programs, agricultural broadcasts, musical programs, and various special broadcasts correlated with specific community drives. On the other hand, some of these schools had no relationship with the radio stations other than that some of their students took part in radio programs. Even so, during 1940–41 boys and girls in some six hundred Ohio schools had the actual experience of facing a microphone. If we assume that, on the average, twenty students per school had this experience, then there were some twelve thousand student participants (but, even so, less than 1 per cent of the school population).

V. Some Interpretations and Recommendations

From the data presented in this report, we make the following interpretative recommendations. It is no tribute to American education that in 1941, with radio fully established as a medium of communication, nearly half the schools in Ohio and probably more than half the schools in the United States had no radio-receiving facilities whatsoever. It is some consolation, of course, to realize that the situation has improved in the last five years, but with the need for national understanding and unity becoming more apparent every day it is unfortunate, perhaps tragic, that thousands upon thousands of American schools lack the basic equipment with which students and teachers alike can listen to radio programs of national importance. In a period of national emergency it would be impossible to reach through radio half the schools in the United States. To all persons interested in American education and conscious of the importance of radio in that education, then, our first recommendation is:

That every effort be made by school systems, by parent groups, and by other educational and civic organizations to provide schools with radios.

A second recommendation grows out of the fact that urban schools consistently owned radio equipment and used radio programs more frequently than rural schools, and particularly out of the fact that one-room schools so seldom made use of radio. Yet it is the rural schools of the country—and especially the one-room schools—which need the curricular assistance of school broadcasts and the curricular stimulation of radio methodology. Urban schools far more than rural schools possess the educational advantages of books, magazines, and other current reading materials; slides, films, and other visual aids; museums, factories, stores, and other places to visit. Yet both urban and rural schools can listen to school broadcasts and other educational radio programs. No expensive equipment is required, no technical knowledge necessary. The programs are free to any teacher who will but turn the dial. This unique advantage of radio—its ability to obliterate geographical and political boundaries—leads, then, to a second recommendation:

That special efforts be made to stimulate the use of radio in rural schools and especially in the one-room rural schools. The recommendation may mean state subsidy or partial subsidy to impoverished rural districts so that schools can have radios. It means co-operation between educators and broadcasters in making broadcasts available to schools at times when teachers can use them. It means pressure from educators upon broadcasters so that more radio stations carry network school broadcasts. It means more effective publicizing of available radio programs so that rural teachers will be aware of "what's on the air." The techniques are many, once the need is recognized.

A minor recommendation comes out of the fact that schools with central radio-sound equipment used school broadcasts less frequently than did schools with portable sets. This apparent lack of relationship between elaborate radio equipment and the effective use of that equipment—plus our observations of school situations—seems to indicate that some schools purchase expensive equipment without recognizing clearly the educational ways in which that equipment can be used. The third recommendation, then, is this:

That schools with central radio-sound systems (and other radio equipment) examine carefully the actual and potential uses made of that equipment.[1]

Another recommendation involving equipment grows out of the fact that 87 per cent of the records and recordings available in schools are in music. Without denying the importance and values of music records, it is unfortunate that those schools with record-playing equipment possess an average of only two records usable in literature classes and only one record appropriate in social-studies classes. There are so many excellent recordings of historical events and personalities, of dramatic and poetic masterpieces, of songs and stories, that our fourth recommendation is this:

That schools with record-playing equipment, either phonographs or 16-inch transcription players, make more effective use of that equipment by purchasing records usable and valuable in different curricular areas.[2]

[1] In this connection teachers and administrators may find some valuable suggestions in *The School Radio-Sound System* by R. R. Lowdermilk, published by the Federal Radio Education Committee, Washington, D. C., 1941.

[2] Those persons interested in building a library of recordings will want to examine *Recordings for School Use: a Catalog of Appraisals* by J. Robert Miles (Yonkers-on-Hudson: World Book Company, 1942).

One of the significant and seemingly obvious findings of our survey of Ohio was that the classroom use of radio is greatest in those cities or regions in which administrative programs of radio education have been developed, for example, in Akron or Cleveland or Toledo. Although it is certainly true that competent and imaginative teachers in any community can and do use teaching aids such as school broadcasts to stimulate and vivify the classroom experiences of youngsters, it is also true that teachers in general do not use these aids without administrative sanction and approval. That school broadcasts were used so much more often in Akron, Cleveland, and Toledo than in the rest of the state points to a fifth recommendation:

That school administrators who believe in the educational potentialities of radio not only make public their approval of radio education but also design and put into action a program of radio production, utilization, and in-service education of teachers.

One of the curious, yet significant facts evident in the Ohio survey was that a single series of broadcasts might be used in all twelve grades. Thus we found that high-school series were used in elementary-school classrooms and, although much less frequently, that elementary-school broadcasts were heard in high-school classrooms. To some broadcasters this span of classroom listening might seem desirable evidence of audience size and range. To those sincerely interested in promoting the effective use of radio in classrooms, however, it spells a sixth recommendation:

That teachers' colleges, state and county departments of education, and the administrative units of city school systems develop more effective programs for the pre-service and in-service training of teachers in the use of radio in the classroom.

It seems obvious that third- and fourth-grade youngsters listening to abstract discussions of "Money and Trade" or "Self-Sufficiency versus Trade Expansion" (as they did in listening to the series, This Living World) can gain little from that listening experience except, perhaps, a distaste for "educational" radio programs. There is, of course, the correlative recommendation to broadcasters that they label each series for a specific span of grades and then keep the broadcasts within

the intellectual and emotional comprehension of students within all of these grades.

The preponderance of listening in the elementary school, even to series intended primarily for secondary-school students, suggests a seventh recommendation:

That broadcasters, particularly the network broadcasters, design their school programs for elementary-school listeners.

To some this recommendation may seem drastic and narrow in its neglect of secondary-school listeners. But network school broadcasts, heard from coast to coast, are too important educationally not to be directed toward the largest possible classroom audiences. Those audiences lie in Grades I–VI. Local schools of the air, with series of broadcasts related directly to this or that course of study, can and should produce programs for secondary-school classes. But network and even regional schools of the air, if they are to reach their largest possible audiences, should be concerned primarily with programs for elementary-school classrooms.

It is encouraging and significant that three-fourths of the schools of Ohio give some attention, through discussions and program recommendations, to the out-of-school radio listening of students. This widespread acceptance of social and cultural values in radio suggests an eighth recommendation:

That teachers and administrators interested in the educational values of radio listening at home become familiar with the rich variety of programs on the air.

This recommendation means, obviously, that teachers should themselves listen to radio programs, not only to the symphony orchestras and other cultural and educational programs, but also to some of the quiz contests, radio theatres of the air, variety shows, and dance orchestras. Only by knowing what is on the air can teachers make wise recommendations to their students. Teachers interested in pupils' out-of-school listening should, of course, make use of the monthly schedules and other materials sent free upon request by the three major networks and by many individual stations.

A last recommendation growing out of our survey data relates to the place of radio in school curriculums and courses of study. It is encouraging that a seventh of the schools of Ohio have curricular courses or units dealing with radio—

most of them in science and mathematics. But it is discouraging to realize that very few schools have courses or units dealing with the social aspects of radio as a medium of mass communication or with the dramatic and poetic possibilities of radio as a form of literature. This lack of attention given to radio leads to our ninth recommendation:

That teachers and administrators re-examine their curriculums to see whether radio should or should not be emphasized in different courses and in different grades.

It seems obvious, for example, that teachers of drama should pay some attention to the artistic and literary possibilities of radio, teachers of social studies to the social advantages and dangers in mass communication, teachers of industrial arts to the operation and repair of radio sets, teachers of physics to the scientific explanation of radio broadcasting, and the like. Comparatively few curricular revisions involving radio have been made, but teachers many find some suggestions in books such as *Radio and English Teaching* published by the National Council of Teachers of English,[3] in various magazine articles dealing with specific subject-matter fields, or in occasional courses of study such as that for tenth-grade English in Rochester, New York.

These, then, are nine recommendations for the improvement of radio in classroom education. Although based upon data from Ohio schools, they are applicable to the nation as a whole. They involve efforts on the part of broadcasters, school superintendents, principals and supervisors, teachers, university professors, and all those individuals interested in making effective use of radio in the educational experiences of boys and girls. As the situation in Ohio indicates, radio is still in its educational childhood; much work remains to be done before it grows to adulthood.

[3] Herzberg, Max J., editor. New York: D. Appleton-Century Company, 1941.

EDITORIAL COMMENT

Understanding versus Tolerance

As THE schools of the nation swing into line for action in the new world that has now emerged, they must forge new ideas to meet the new conditions. This nation can never again be isolated from the economic and political tides that sweep the globe. We cannot close our doors and through the windows watch the hurricanes and tornadoes of civilization do their work. We belong as a participant in all that happens everywhere.

In this new world the tools of reconstruction will be ideas. In the past, invention has been synonymous with machines upon which the progress of humanity has been based. In the immediate future the tools of evolution will be ideas. We can easily declare a moratorium on machinery because we have more than enough until we learn how to make them the servants of ideas.

The new ideas which we must perfect are in the experimental stage. We have not perfected, polished, nor tested such ideas as a world court, a union of democracies, the four freedoms, a parliament of man, free flow of raw materials and manufactured products, and scores of other ideas which will dominate the history of civilization in the new era.

The schools of course cannot be responsible for the tooling of these machines. They will have to be processed in the workshops of mankind. But as fast as they take form and are tried out on the proving grounds of public discussion, the schools must identify them and make youth progressively aware of the ideas as they emerge.

Never have the schools been faced with a problem so immediate, so dramatic, and so significant in human development as they are facing today. The youth of 1942 are the voters of 1945, 1950, and 1960. What the youth learn in 1942 or tragically do not learn will control in substantial fashion the destinies of nations in the last fifty years of this century.

While we are waiting for the tooling of the ideas of the world in this period of confusion when inventors are perfecting new ideas, there is one service basic to all ideas that the

schools can immediately contribute to the education of youth. They can change the attitude of youth from tolerance to understanding.

For the last half century the schools have inculcated the idea of tolerance of the opinions of others. But tolerance is a dangerous word. It assumes that we are right and proposes that we allow the ignorant to hold their own views. It implies that we are superior and that the holders of opposing views are inferior. It assumes also that those with whom we deal are opponents but that we must be kind to these inferior, ignorant, and hostile people. It is a smug word with everything that smugness implies.

In the new globar world which is emerging there is no place for tolerance. The idea is *passé*. To tolerate the Germans, the Japanese, the Russians, the British, and the Chinese as well as the Indians, the Javanese, and the Celebese is a futile attitude.

WHAT the schools must do is to understand the nations of the world. In some cases we cannot tolerate when we understand. But in most cases when we understand we learn that other people have compelling reasons for what they do and when we see these reasons, tolerance of their positions follows without effort.

A fashion has grown in American schools in their study of foreign peoples to note the difference between their customs, dress, and manners and ours, and then to label them as funny, odd, and inferior because they are different. Our children learn about foreign people in an atmosphere of superiority and jocularity.

But if we are going to work intelligently with foreign peoples as we must if civilization is to survive, as it will, for the American youth of today, who will be the American voters and statesmen of tomorrow, this must change. Youth must learn that these different people are fundamentally reasonable people with drives, ideals, aims, and purposes which are as sound, as just and as rational for them as ours are for us. They must learn that the common people of the world are good people; that while they have their faults and failings just as Americans have, all people everywhere mean well and do what for them seems to be the sensible thing to do.

American youth should not become sentimentalists. With wide-open eyes they should be taught to understand people sympathetically and critically. Then they may tolerate or they may attack. But as understanding grows, opposition lessens.

The schools have an emergency task to quickly assemble all that is known about the cultures of other people and select and organize experiences for the schoolroom so that the United States can take its place in world affairs as a wise and intelligent participant. Their major and immediate contribution is to promote understanding. Tolerance is good enough when great issues are not at stake. Understanding will be essential

> When the war drums throb no longer,
> And the battle flags are furled
> In the Parliament of man,
> The Federation of the world.

W. W. C.

Conference on Human Development in Wartime

It is appropriate in this time of war and world-wide crisis that we concern ourselves with constructive measures for the most effective use of our human resources. There must immediately be a mobilization and training of human abilities to meet emergency needs. Plans must be made to promote and protect developing children during these hazardous times. And above all, there must be investigation of the potentialities of human development for building a better world after the war. Persons and institutions qualified to study the impact of war on human personality must be responsible for proposing ways and means of coping with the forces which would otherwise deplete the nation's most precious and promising resources.

The Graduate School of Ohio State University is sponsoring a conference for the week of June 29–July 3 so that all who have concern with the conservation of human resources may have an opportunity to extend their knowledge and understanding of human development and its relationship to the present emergency. Outstanding speakers will present the implications of such fields as psychology, sociology, education, psychiatry, medicine, and nutrition for wartime needs. Recent developments in the various specialized fields will be presented in their interrelations and with reference to immediate and

long-range plans for social action and for safeguarding the youth of our democracy from the hazards of insecurity, ill health, exploitation, and social neglect.

These general sessions, however, will serve primarily to set the stage for smaller "workshops" or "special interest" sessions. In these smaller groups persons of similar problems and interest will attempt, in a series of sessions, to develop and apply to their own particular problems the principles set forth in the general sessions. Distinguished resource consultants in specialized aspects of human development will act as leaders at these sessions. In addition to a chairman and vice-chairman for each group, approximately fifty resource consultants will be available for meetings with the different groups for the discussion of problems and for consultation on individual problems. The program which follows indicates the many special interest groups which are already being organized. Additional special sections will be organized as the requests for them arise. At the concluding session the deliberations of these groups will be brought together for integrated consideration.

The Reading Conference, which has been held on the campus during the last two years, will be co-ordinated with this larger Conference on Human Development. As in previous years, those with special interests within the field of reading will have an opportunity to work on special problems in a number of interest groups and with a number of consultants. These and other resource consultants will be available for assistance with individual problems.

Teachers, recreation workers, social workers, physical educators, nutritionists, child-guidance workers, sociologists, mental hygienists, and parents will be interested in the Conference and its special interest groups. Early registration is desired and in order that there may be more adequate planning for special interests and needs. Those who hope to attend are cordially invited to indicate to the Conference Committee the problems which they hope to see considered. Housing accommodations are available for a limited number of persons in the University dormitories at $1.00 per night. The registration fee for the conference is $3.00 for students enrolled in the Summer Session, and $5.00 for others. Correspondence should be addressed to the Institute on Human Development, Graduate School, Ohio State University.

THE PROGRAM

Monday morning—Registration

Monday 3:00 P.M.

First General Session

Presiding, PRESIDENT BEVIS, *Ohio State University*

Introduction to the Conference on Human Development in Wartime
DANIEL C. PRESCOTT, *Head of the Division of Child Development of the American Council on Education, and Professor of Education, University of Chicago*

War-Caused Problems of the Family
HENRY C. SCHUMACKER, *Director, Child Guidance Clinic, Cleveland*

Is Delinquency Inevitable?
WILLARD C. OLSON, *Director of Research in Child Development, and Professor of Educational Psychology, University of Michigan*

Monday 7:30 P.M.

Second General Session

Presiding, ALPHEUS W. SMITH, *Dean, Graduate School, Ohio State University*

Disease, War, and Human Development
C. A. MILLS, *Professor of Experimental Medicine, University of Cincinnati*

Human Development through Nutrition
ALICE A. SMITH, *Nutritionist, Cleveland Health Council*

Tuesday 11:00 A.M.

Organization Meeting of Special Interest Groups

Areas and Chairmen

Nutrition—HUGHINA MCKAY, *Professor of Home Economics, Ohio State University*

Health Education—PAUL E. LANDIS, *Ohio State Department of Education*

Adult Education—HERSCHEL W. NISONGER, *Professor of Adult Education, Ohio State University*

Education and Citizenship—LLOYD A. COOK, *Associate Professor of Sociology, Ohio State University*

Family Life and Parent Education—AMALIE K. NELSON, *Chairman, Family Relations Committee, Y.W.C.A., Columbus*

Youth Guidance—ROSS L. MOONEY, *Assistant Professor of Education, Bureau of Educational Research, Ohio State University*

Recreation—ANN PATERSON, *Instructor in Health Education, Summer Session, Ohio State University*

Reading—WILDA ROSEBROOK, *Associate Professor of Educational Psychology, Ohio State University*

Teacher Education—SIDNEY L. PRESSEY, *Professor of Psychology, Ohio State University*

Community Resources—JOHN HALL, *Council of Social Agencies, Columbus*

Child Development—WINONA MORGAN, *Associate Professor of Home Economics, Ohio State University*

Tuesday 2:00 P.M.—First Special Interest Group Meetings

Tuesday 8:00 P.M.

Third General Session

Presiding, W. W. CHARTERS, *Director, Bureau of Educational Research, Ohio State University*

Psychological Hazards of Wartime

CARL R. ROGERS, *Professor of Psychology, Ohio State University*

The Community Organizes for Human Development

LLOYD A. COOK, *Associate Professor of Sociology, Ohio State University*

Wednesday morning—Free for Conference and Study

Wednesday 2:00 P.M.—Second Special Interest Group Meetings

Wednesday 8:00 P.M.—Third Special Interest Group Meetings

Thursday morning—Free for Conference and Study

Thursday 2:00 P.M.—Fourth Special Interest Group Meetings

Thursday 8:00 P.M.

Fourth General Session

Presiding, ARTHUR J. KLEIN, *Dean, College of Education, Ohio State University*

Development through Recreation

MARK A. MCCLOSKEY, *Director of Recreation, Office of Defense Health and Welfare Services, Washington*

Educational Reconstruction

KARL BIGELOW, *Director, Commission on Teacher Education, American Council on Education*

Friday 10:00 A.M.

Fifth General Session

Presiding, KENNETH C. RAY, *Director, Ohio State Department of Education*

Relation of Reading Interests and Other Factors in Development

DAVID KOPEL, *Associate Professor of Educational Psychology, Chicago Teachers College*

Friday 2:00 P.M.

Sixth General Session

Presiding, HORACE B. ENGLISH, *Chairman of the Institute on Human Development, Ohio State University*

Synthesis of Findings and Conclusions

Appropriate Respondents from the Study Groups

READINGS

Books to Read

EDWARDS, NEWTON, compiler and editor. *Education in a Democracy.* Chicago: University of Chicago Press, 1941. xi+160 pp.

This book comprises a series of eight lectures given by as many members of the Department of Education of the University of Chicago, under the auspices of the Charles R. Walgreen Foundation for the Study of American Institutions. The lectures were first addressed to students, and in printed form are intended primarily for the layman rather than the professional educator. They deal with the evolution of American educational ideals, the implications of a democratic philosophy for various aspects of education, the social significance of some of the newer educational services, and the university's responsibility for education in a democracy.

It is made clear that this is not a pronouncement of the Department of Education, but that, on the contrary, each author is alone responsible for what he says. Nevertheless there is a general unity in viewpoint, which may be roughly characterized as being forward-looking without being radical.

R. H. ECKELBERRY

KYTE, GEORGE C. *The Principal at Work.* New York: Ginn and Company, 1941. x+496 pp.

This book deals with the major functions of the elementary-school principal. His position in the school system, in planning his own work and in co-ordinating the work of his teachers, administrative and supervisory activities, and public-relation responsibilities are discussed. The book has been written for use of students of education preparing for positions as elementary-school principals and as a guide or means for self-diagnosis and evaluation by the principal at work in his school.

The 55 tables and diagrams offer suggestive ways in which a principal may assemble data essential for developing a good program of elementary education.

The author has organized the contents in terms of the various responsibilities which a good principal must recognize and assume. The analysis is complete and therefore the treatment of any one aspect of the principal's functions is necessarily brief. The reader who is interested in a more exhaustive study of a particular function of the principal will find selected references at the end of each chapter.

The Principal at Work should be valuable in helping the prospective principal appreciate the many and varied duties he must not neglect. It should serve as a useful way in which the principal at work can check on his use of time.

ROBERT S. GILCHRIST

JACOBSON, PAUL B., AND REAVIS, WILLIAM C. *Duties of School Principals.* New York: Prentice-Hall, Incorporated, 1941. xxiv+812 pp.

Pointing out that the feeling is growing among educators that the principal should be "the responsible head of his school," these authors

find opportunity to touch on most phases of the educational problem below the college level. The book thus becomes a compendium of the best practices, described in rather minute detail, of the better schools.

Statistical findings of educational research support the author's conclusions, but these gentlemen, who exhibit a first-hand knowledge of the daily problems of the secondary-school principal, do not hesitate to give their own recommendations, cautioning against the acceptance of deductions from too small a sampling or from incomplete data.

The inclusion of elementary-school duties, described in much less detail, gives a continuity of treatment that is helpful. It is to be hoped, however, that elementary principals do not find in this book encouragement to adopt practices designed for older pupils.

In a brief review, questions cannot be raised as to the validity of certain conclusions. The underlying philosophy of the book is sound. The young man or young woman entering upon the duties of a principal will find it indispensable as a handbook, and to the experienced principal, it offers a challenge to re-evaluate his educational procedures.

ALVA EDWARDS,
South High School, Columbus

HOWARD, HOMER. *Mathematics Teachers' Views on Certain Issues in the Teaching of Mathematics.* New York: Teachers College, Columbia University, 1941. viii+134 pp. (Teachers College, Columbia University, Contributions to Education, No. 827)

No extended reading of the professional literature concerned with the teaching of mathematics is necessary to discover that there are certain basic issues on which teachers of mathematics are in wide disagreement. One believes, for example, that among the many satisfactions which come from the study of mathematics is the glimpse of absolute truth which it reveals to the student, while another believes that absolute truth is a figment of the imagination and that the theorems of mathematics are no truer than the assumptions from which they are derived. One writer takes the position that mathematics should be studied for its own sake and that the acquiring of mathematical knowledge is an end in itself, while another operates on the assumption that mathematics is but an instrument created by man for the purpose of solving his problems.

What are these fundamental issues? And is there any way by which the position of a teacher with respect to them can be discovered? Are these issues so related that his position on one of them tends to indicate his position on each of the others? And what are the general positions to which mathematics teachers are likely to subscribe? These are some of the questions which Mr. Howard has investigated, and his courage in undertaking a study of these significant but difficult problems is equaled by the soundness of his method and the excellence of his report.

By means of an interesting technique, which is clearly and effectively described, he isolates twelve basic issues in the teaching of mathematics and outlines contrasting values associated with the position taken on each of these twelve issues. The attitude of a teacher toward these twelve issues is indicated by his approval or disapproval of each of 97 statements whose relation to

these issues has been validated by the judgment of distinguished teachers and students of mathematics. These statements were sent to teachers and students widely distributed throughout the United States and the data thus secured are carefully interpreted. From the results one is able to get a general picture of how mathematics teachers stand on such important issues as "mathematics considered as a finished, perfect system" rather than "a growing body of experience"; "pure mathematics as an all-important subject of specific teacher training" rather than "professional or pedagogical studies of mathematics"; "teaching which tends to be limited to the unique processes of mathematics" rather than "teaching which tends to include such activities as formulation of problems, accumulation of data, discrimination among data, and the use of precise language."

Mr. Howard has made a significant contribution to mathematics education. He has not only defined twelve major issues in the teaching of mathematics, but he has provided a technique by which the general position of a teacher with respect to these twelve issues may be determined and the usefulness of this study in teacher-training programs makes it particularly valuable.

HAROLD FAWCETT

HADDOW, ANNA. *Political Science in American Colleges and Universities, 1636–1900.* New York: D. Appleton-Century Company, 1939. xiv+308 pp.

The Department of Political Science of the Ohio State University was established (under the chairmanship of its present head, Henry R. Spencer) in 1909, which was just five years after the founding of the American Political Science Association marked the recognition of this subject as a separate discipline. But, "under one guise or another, the subject runs back practically to the beginning of our colleges." Miss Haddow's dissertation, edited by Mr. William Anderson (of the University of Minnesota) and subsidized by the American Council of Learned Societies, illuminates this evolution of three centuries.

The "moral philosophy" of the colonial period was gradually supplemented after the Revolution by courses in constitutional and international law. After the Civil War, the general rebellion against the classical curriculum permitted more courses on government, though they were still usually offered by the history department. The German emphasis on scientific method became especially strong in the four universities which have trained the bulk of our political scientists: Columbia, Harvard, Johns Hopkins, and Chicago.

The volume is profusely documented, and the bibliography of 358 items includes a listing of textbooks in political science and related subjects published before 1900. Their significance is also the subject of a chapter in the book.

H. S. FOSTER, JR.

SUMPTION, MERLE R. *Three Hundred Gifted Children: a Follow-up Study of the Results of Special Education of Superior Children.* Yonkers-on-Hudson: World Book Company, 1941. xviii+235 pp.

This is a report of a survey of the outcomes of the "major work

program" of the Cleveland public-school system. This program provides special education for pupils of superior intelligence. Beginning with a single class of twenty-five pupils brought together from fourth, fifth, and sixth grades in 1921, by 1939 some twelve hundred pupils were enrolled in major-work classes in ten elementary schools, three junior high schools, and three senior high schools. Three earlier surveys of this program, like most surveys of classes for pupils of superior intelligence in other cities, had made use of standard achievement tests. The results indicated that the program had not prevented these pupils from "mastering fundmental essentials in the curriculum," even though the emphasis of the major-work program has been placed on less tangible outcomes.

This survey has undertaken to evaluate the outcomes of this program in terms of the major objectives of education: desirable social relationships, self-expression, critical thinking, worth-while activities, knowledges and skills, and mental and physical health. Instead of directing attention to the pupils in these classes, questionnaire returns were obtained from a sampling of former pupils in the Cleveland schools, men and women now ranging in age from eighteen to thirty. For statistical comparison these were divided into three matched groups as follows:

Group A—Former regular pupils without major-work experience (Control group)

Group B—Pupils who spent two to three years in major-work classes

Group C—Pupils who spent four to twelve years in these classes

All members of Group A would have been eligible for enrollment in major-work classes, the criterion for which has been a Stanford-Binet *IQ* of 120 or better. The groups were matched for sex and present age, and as nearly as possible for intelligence quotient, place of birth, nationality, and race background. The three men listed as No. 10 in the several groups, for example, were twenty-four years old, were all born in Cleveland of American-German parents, and when tested as pupils had *IQ*'s of 127, 127, and 129, respectively. Of the 65 individuals in each group 31 were men and 34 women; median age, twenty-four years. Questionnaire returns were also received from 135 individuals who had been in major-work classes from one to twelve years but were not included in any of these three matched groups.

Space does not permit any listing of conclusions drawn from this survey nor the author's recommendations for the improvement of the major-work program. As might be expected in the case of groups so closely matched, many comparisons show little difference among the groups. The favorite magazine of all three groups is the *Reader's Digest*; about two-fifths of the members of each group have feelings of inferiority; and the like. Where there are differences, Group B is usually intermediate between Groups A and C. For example, the numbers in full-time school are 4, 9, and 16 respectively for Groups A, B, and C.

In general the comparisons are favorable to the major-work program and a good case is made for the recommendation that qualified pupils "not only be offered the opportunity but be encouraged to participate" in it.

The use of the term *gifted* in connection with these pupils, as in the title of this report, will be misleading to many who have in mind Terman's

use of the term. Only about 5 of the boys and 4 of the girls in Group C would have qualified for Terman's experimental group. The term, of course, is relative. Hollingworth and Bentley in their books have used a Stanford-Binet *IQ* of 130 or better as a criterion. This would include about one per cent of an average-type school population. The Cleveland criterion of an *IQ* of 120 or better on the 1916 Stanford-Binet includes about 6 per cent; on the revised Stanford-Binet, about 10 per cent. An *IQ* of 120 is about a median psychometric score for pupils in a high-class private school such as Horace Mann.

More fundamental is the proposition, completely ignored in the recommendations based on this survey, that the educational program of a child of superior ability is a guidance problem to be worked out on the basis of an individual case study. Candidates for such study by the methods of clinical psychology and educational guidance may well be selected by an intelligence-quotient criterion. But whether for a particular pupil at a particular time and in a particular school enrichment is better than acceleration, or participation in this major-work program is preferable, should never be decided by any rule of thumb. No matter how conclusive the findings of this survey, there is still the problem of the individual pupil.

FRANCIS N. MAXFIELD

REYNOLDS, MARTHA MAY. *Children from Seed to Saplings.* New York: McGraw-Hill Book Company, 1939. x+337 pp.

The author states that the aim of this book is "to guide adults to an understanding of children." It is written informally, and is divided into chapters and sections on the basis of age. It does not present results of scientific research problems except as reference, but follows the development of the child from year to year with attempts to interpret his behavior. The life span of a child from conception to the age of eighteen is a long and complicated developmental history, and can be presented in one volume only very superficially. The preschool age is discussed in 34 pages. The author succeeds however, in presenting a framework which demarkates the essential growth stages at each age. The book could be most helpful as a supplement to actual observation. This the author repeatedly encourages.

AMALIE K. NELSON
Columbus, Ohio

JACK, HAROLD K. *Physical Education for Small Elementary Schools.* New York: A. S. Barnes and Company, 1941. vii+184 pp.

Many small schools, both rural and urban, are without even the occasional services of a physical-education specialist. For this reason many physical-education programs are without facilities, progression, variety and purpose and above all—leadership.

To help the rather inexperienced teacher, Mr. Jack has supplied a concise, yet complete, volume of physical-education activities. Furthermore, he has provided a daily guide listing specific activities with explanatory references for teaching them. Progression from Grades I to VIII is kept in mind as are some of the better recommendations for a good curriculum. Games, rhythms, relays, story plays and mimetics, tumbling and self-testing stunts, as well as athletic events are included.

The author admittedly has drawn heavily from earlier good source materials for these grades but has reorganized the material in a manner exceedingly helpful to the inexperienced teacher in the small school. The more experienced teacher, as Mr. Jack suggests, may, and no doubt will, use the material with greater flexibility and creativeness than the syllabus outline at first suggests.

CHARLES C. COWELL.

HAYAKAWA, S. I. *Language in Action: a Guide to Accurate Thinking, Reading and Writing.* New York: Harcourt, Brace and Company, 1941. ix+243 pp.

The subtitle of this stimulating book— *A Guide to Accurate Thinking, Reading and Writing*—suggests Mr. Hayakawa's aim, for this is not just another in the unending series of books on composition. Following largely patterns laid down by Alfred Korzybski for the analysis of the relationship between words and things, Mr. Hayakawa has written, chiefly for the freshman composition course, a book which attempts to show "how language works, what we are doing when we open these irresponsible mouths of ours, and what it is that happens, or should happen, when we listen or read" (page 27). Language is here studied in its function of communication, and if it is to fulfill its function honestly, rightly, and efficiently it demands as skillful handling and as shrewd analysis from the audience as from the speaker. Primarily, then, the author seeks to dispel linguistic naïveté, to develop such an awareness of the word, of the difference between factual, verifiable content and affective connotation, as will in the "thinking, talking, listening, reading, and writing we do in everyday life" (page iii) enable us to create a truly adult, civilized attitude toward language and therefore toward the ideas and things communicated by language.

The time has long been ripe for the movement of which this book is a part. In a world as susceptible to the influence of the word as ours, where the utterances of one man go at once to the hundreds of millions, where techniques have been shrewdly devised to sell us one soap or one faith instead of another, where our peace, our prosperity, our very lives are all too often at the mercy of the wielders of words, no lesson is more important than this one which the teachers of "general semantics" have to offer.

But Mr. Hayakawa does not confine his book to those aspects of language which reflect our poor befuddled efforts to think about economics and politics. Those of us who devote our time to teaching what language conveys of beauty and terror, love and laughter and noble thought—all the vast and enrichening heritage of literature—will find that these new patterns for the analysis of meaning can supply us, too, with a richer, more thoughtful, more aware technique for our job.

For the layman and the beginner I know no better introduction to the field of modern "semantics" than *Language in Action*; and the more advanced student or teacher will find much to enjoy (and to use) in the freshness, pertinence, and immediacy with which the author presents his ideas. The book should be required reading for teachers and students alike.

ROBERT M. ESTRICH

ER

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